

## Active missions and the VxOs with THEMIS as an Example

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The VxOs provide a host of services to data producers and researchers. They help data producers to describe their data in standard SPASE terms that enable scientists to understand data products from a wide range of missions. They offer search interfaces based on specified criteria that help researchers discover conjunctions, prominent events, and intervals of interest. In this talk, we show how VMO services can be used with THEMIS observations to identify magnetotail intervals marked by high speed flows, enhanced densities, or high temperatures. We present statistical surveys of when and where these phenomena occur. We then show how the VMO services can be used to identify events in which two or more THEMIS spacecraft observe specified features for more detailed analysis. We conclude by discussing the current limitations of VMO tools and outline plans for the future.